

IN THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1.-11. (Canceled)
12. (New) A liquid jet head comprising:
 - a substrate adapted to be mounted on a liquid ejecting instrument;
 - a liquid jet system positioned on the substrate, said liquid jet system being adapted to eject liquid onto a medium from a distance;
 - a control unit, coupled to said liquid jet system, to activate said liquid jet system for ejecting liquid onto the medium; and
 - measurement means for acting, without physical contact with the medium, to measure the distance between the liquid jet head and the medium, said measurement means being coupled to said control unit,
 - wherein said measurement means is positioned on the substrate.
13. (New) A liquid jet head according to claim 1, wherein said control unit is positioned on said substrate.
14. (New) A liquid jet head according to claim 1, wherein said measurement means further comprises an optical system to measure the distance between said liquid jet head and the medium.
15. (New) A liquid jet head according to claim 1, wherein said measurement means further comprises an ultrasonic acoustic probe serving to measure the distance between said liquid jet head and the medium.
16. (New) A liquid jet head according to claim 1, wherein said substrate further comprises a supply channel which extends between an inlet port designed to be connected to a liquid tank housed within the liquid ejecting instrument, and an outlet port connected to said liquid jet system.

17. (New) A liquid jet head according to claim 1, wherein said substrate is made of a material from a group consisting essentially of glass, silicon, ceramic and polymer materials.

18. (New) A liquid jet head according to Claim 1, wherein said liquid jet system further comprises a thermal liquid jet system adapted for ejecting liquid droplets from at least one orifice.

19. (New) A liquid jet head according to claim 18, wherein said substrate is formed by a plate having a first side designed to face the medium and a second side opposite to the first side, and wherein said thermal liquid jet system comprises:

at least one resistive heater element positioned on the first side of said substrate, and

a block mounted on the first side of the substrate, said block having at least one liquid channel having an inlet chamber and an outlet orifice facing said at least one resistive heater element for ejecting ink droplets onto the medium.

20. (New) A liquid jet head according to claim 1, further comprising a movement detector means positioned on said substrate, said movement detector means being adapted to detect movement of the liquid jet head, said movement detector means being coupled to said control unit.

21. (New) A liquid ejecting instrument comprising a substantially tubular element extending between a first end and a second end and designed to be hand-held by a user, said tubular element comprising:

a liquid tank;

an electrical power source; and

a liquid jet head according to any one of preceding claims, said liquid jet head being mounted at the first end of the tubular element and connected to the electrical power source.

22. (New) A liquid jet head comprising:
a substrate adapted to be mounted on a liquid ejecting instrument;
a liquid jet system positioned on the substrate, said liquid jet system being adapted to eject liquid onto a medium from a distance;
a control unit coupled to said liquid jet system, to activate said liquid jet system for ejecting liquid onto the medium; and
measurement means for acting, without physical contact with the medium, to measure the distance between the liquid jet head and the medium, said measurement means being coupled to said control unit,
wherein said measurement means is positioned on the substrate; and
a movement detector means positioned on said substrate, said movement detector means being adapted to detect movement of the liquid jet head, said movement detector means being coupled to said control unit.

23. (New) A liquid jet head comprising:
a substrate adapted to be mounted on a liquid ejecting instrument;
a liquid jet system positioned on the substrate, said liquid jet system being adapted to eject liquid onto a medium from a distance;
a control unit, coupled to said liquid jet system, to activate said liquid jet system for ejecting liquid onto the medium; and
measurement means for acting, without physical contact with the medium, to measure the distance between the liquid jet head and the medium, said measurement means being coupled to said control unit,
wherein said measurement means further comprises an optical system to measure the distance between said liquid jet head and the medium.